

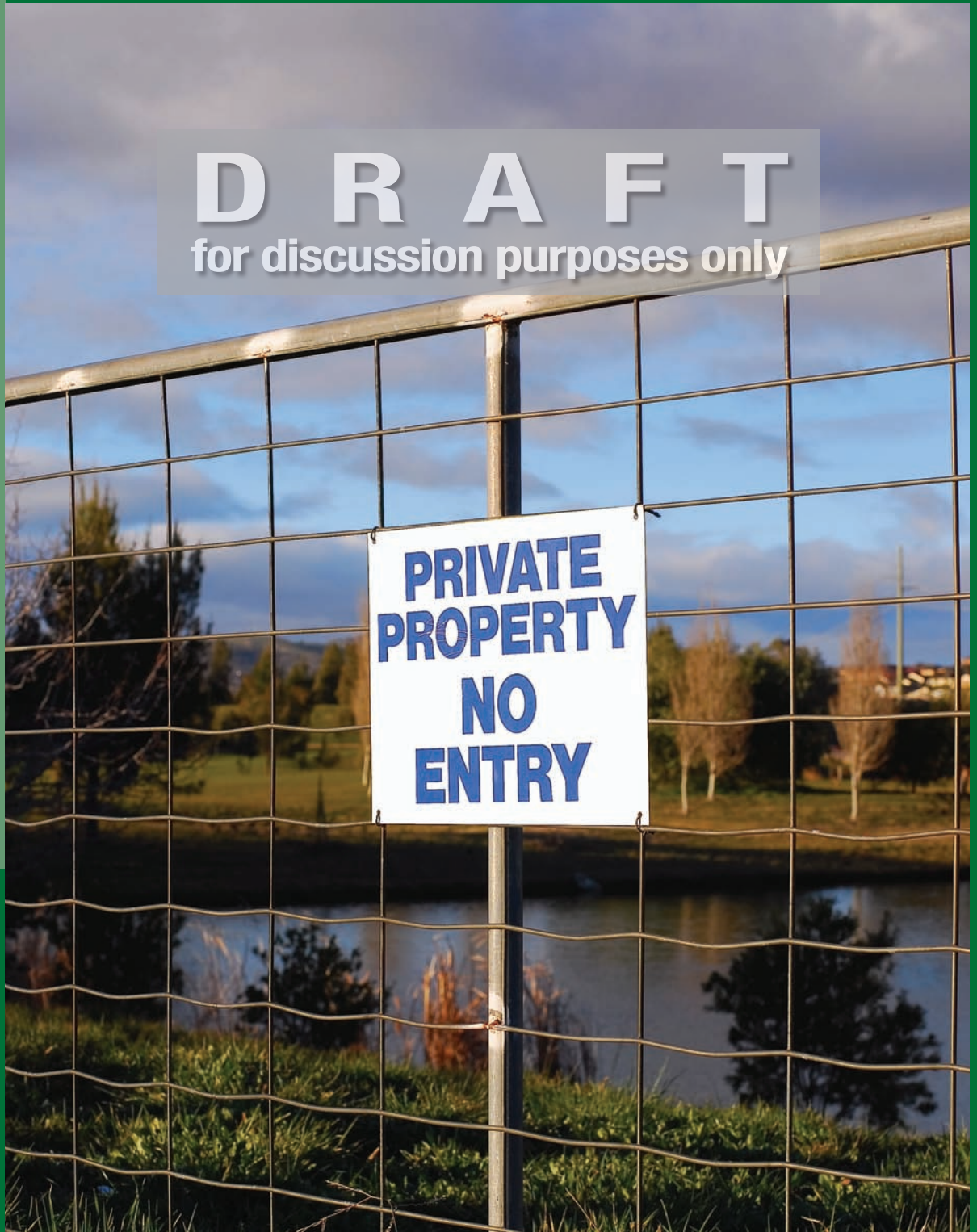
12

Economics
Standard
12.1.4.



Supporting Materials California Education and the Environment Initiative

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Private Property and Resource Conservation

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California Education and the Environment Initiative

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Name: _____

Section 1 Multiple Choice: Select the best answer and circle the correct letter (2 points each)

1. Water in California is:
 - a. free from government regulation
 - b. subject to prior appropriation
 - c. a private property
 - d. a publicly-owned good

2. A Gold Rush prospector likely believed in:
 - a. appropriative rights
 - b. riparian rights
 - c. common rights
 - d. equal rights

3. What did California's 1928 Amendment to the Constitution do?
 - a. It made water public property.
 - b. It proved the Tragedy of the Commons.
 - c. It made timber a private property.
 - d. It proved the triumph of free enterprise.

4. Land trusts are an example of:
 - a. public property
 - b. riparian rights
 - c. private conservation efforts
 - d. scarcity and choice

5. Which of the following is an incentive for private property owners to conserve?
 - a. a tax on resource use
 - b. the Endangered Species Act
 - c. a conservation bank
 - d. the Clean Water Act

6. The tragedy of the commons demonstrates problems with which of the following ways to manage resources?
 - a. common property
 - b. private ownership
 - c. government regulation
 - d. appropriative rights

Private Property and Resource Conservation

Traditional Unit Assessment Master | page 2 of 3

Name: _____

7. Which of the following is a common-property good?
 - a. oil
 - b. timber
 - c. air
 - d. crops

8. How does a conservation easement affect a property owner?
 - a. It restricts a person's use of the property in specific ways.
 - b. It means the person no longer owns the property.
 - c. It gives the government control of the property.
 - d. It encourages the person to harvest resources from the property.

9. Which of the following is an example of a resource that is managed through private property ownership?
 - a. water
 - b. timber
 - c. oceans
 - d. air

10. What was one of the effects of the Owens Valley aqueduct?
 - a. It contributed to the passage of the 1928 constitutional amendment.
 - b. It contributed to the contamination of the Los Angeles water supply.
 - c. It contributed to the wealth of Owens Valley residents.
 - d. It contributed to the argument for private ownership of water.

Section 2 Short Answer Questions: Answer each of the following questions, using complete sentences in your response. (10 points possible for each)

11. Explain the following statement: In the case of water, scarcity involves both quality and quantity.

Private Property and Resource Conservation

Traditional Unit Assessment Master | page 3 of 3

Name: _____

12. Identify and explain one benefit of private property as a means to conserve natural resources. Identify and explain one drawback of private property as a means to conserve natural resources.

13. Explain the *Lux v. Haggin* ruling. What did it reveal about California's water law?

Private Property and Resource Conservation Project Description

Alternative Unit Assessment Master

You are going to complete a senior project that uses the information and insights you have gained through your work in this unit. You will research and report on a natural resource that has been important in your community's economy. You might focus on the past, the present, or both. For example, a focus on timber might begin in the past and continue to the present, while a focus on mercury mining might begin and end in the past if mercury is no longer mined here.

Use these questions to guide your research and help you stay focused. The answers to the questions should appear in some form in your final presentation.

- What resource will you study?
- Was the resource considered common property at one point?
- Was the resource considered private property at one point?
- If so, how did private ownership and use of the resource influence it? How did this affect the economy?
- Did users and owners of the resource choose to conserve or improve the resource? If so, how? If not, what happened to the resource over time?
- Were government incentives and regulations implemented to conserve and improve the resource? If so, describe them. How well did they work? Did conservation or improvement of the resource result from those actions? Why or why not?
- How would you evaluate the impact of private and/or public ownership on the resource? Discuss in your answer the quantity and quality of the resource; who benefited from using (and/or selling) the resource; and who, if anyone or any plant or animal species, was hurt by using or selling of the resource.

Key Unit Vocabulary

Lesson 1 Activity Master

Choice: The act of selecting among options.

Common property: A good that everyone is free to use.

Conservation: The management, protection, and use of resources and natural systems to meet current and future needs.

Conservation easement: A legal agreement between a landowner and land trust or governmental agency that places development restrictions on a tract of land for conservation purposes.

Conservationist: A person who favors management, protection, and use of resources and natural systems to meet current and future needs.

Eminent domain: The right of government to take private property for public use or benefit.

Free enterprise system: An economic system governed by supply and demand.

Incentive: A policy, action, or reward that motivates or inspires someone to take a certain action.

Land trust: Private organization that identifies, protects, and stewards conservation lands for public benefit.

Natural resources: Materials and material capacities supplied by natural systems and used by humans (for example, forests, water, and energy reserves).

Nonrenewable resource: A natural resource that is finite and exhaustible. It cannot be replenished as quickly as it is consumed.

Preservationist: A person who favors protection of resources and natural systems so that they remain in an undisturbed state.

Prior appropriation: A legal concept, developed in the American West, that basically states that “first in time is first in line” when it comes to water.

Private property: Land or other resource owned by an individual, group of individuals, or corporation, as opposed to a governmental agency.

Quality: Degree of excellence.

Quantity: Number of amount.

Regulations: Specific rules created by a government agency or other executive authority to implement and enforce laws and policies.

Renewable resource: A natural resource that can be replenished at a rate comparable to our rate of consumption.

Restoration: The process of returning something, from a work of art to an ecosystem, to an earlier or better condition. Ecological restoration is usually targeted at ecosystems that have been degraded, transformed, or destroyed as the result of human activities.

Scarcity: The available limit of a good or service.

Utilitarianism: The philosophy of utilizing resources for the greatest benefit for the greatest number of people.

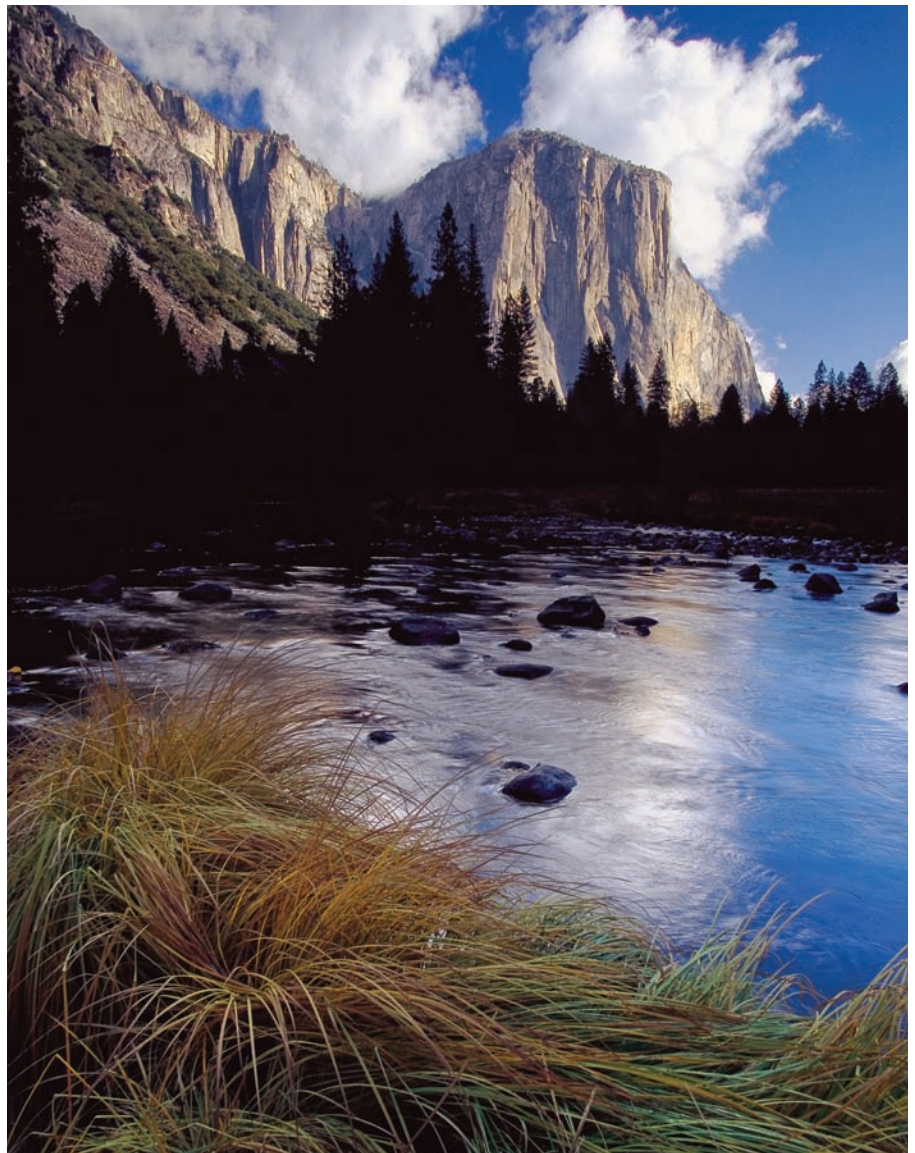
Who Owns the Water?



Talking about the history of California is difficult without also talking about water. Irrigation has allowed people to turn California's fertile valleys into rich farmlands. Large-scale water projects have fed the state's swelling population and growing industries, transforming small towns into bustling metropolitan areas. Water itself has shaped California's diverse ecosystems.

This regional diversity—seen in vast deserts, wild and scenic rivers, and snow-clad mountains—in turn contributes to California's thriving tourism industry. Without access to clean, fresh water, California would not have the booming economy it has today.

Managing California's water resources has not been easy. One of the state's greatest problems is that fresh water is not distributed evenly throughout the state. While most of California's population is in the southern part of the state, most of the fresh water is in the northern part. Sometimes California's river systems flow sporadically, going dry for periods of time, and flooding in others. In the past, these factors led to an unpredictable water supply for most of California. The State's history tells of "wars" over water, as well as large-scale projects that transport fresh water from its sources to areas of high demand.



California river

California Connections: Who Owns the Water?

Lesson 1 Activity Master | page 2 of 4

European colonists in the eastern United States managed water resources through the English common law system. English “riparian law” stated that landowners were entitled to use water adjacent to their property for domestic purposes. Landowners did not actually own the water in the waterways. Instead, they “owned” the right to use it. A landowner could use as much water as he needed, provided his use did not affect another user’s rights to the water. This system worked well in England and the eastern United States, where water was abundant, but the situation was different in the western United States where water was harder to come by.

The first people to inhabit California knew the value of water—availability of water largely dictated the location of Indian settlements. Tribal regions often stretched from mountain ridge to mountain ridge, incorporating entire watersheds. In the sixteenth century, Spanish explorers arrived in California, bringing with them the idea that water could be “owned.” According to Spanish law, each person living in the Spanish communities or “pueblos” received an equal allotment of water “rights.” The pueblo as a whole, rather than any one individual, “owned” the water.



Gold nuggets

Pueblo leadership fined people who needlessly wasted or polluted the pueblo’s water supply.

When prospectors flocked to California by the thousands at the beginning of the Gold Rush in 1848, there were no water laws beyond the “pueblo laws” governing water use in the Spanish settlements. The U.S.–Mexican War had ended, and the U.S. government had not yet established control in the area. As a result, gold miners created their own rules for water use. Fueled by the desire to make great profits, what

resulted was a “first come, first served” perspective on water and waterways in the state. The first miner, or mining company, to stake a claim held “senior” rights over all the natural resources within the claim—including the waters flowing through it.

As mining operations grew, competition for water and other natural resources increased. What resulted was a “use it or lose it” principle—those not making “beneficial” use of their claim and the natural resources from it had to surrender their rights to that claim. Local

California Connections: Who Owns the Water?

Lesson 1 Activity Master | page 3 of 4

officials, most of whom owned mining companies and large farms or ranches, randomly made the judgment about what was “beneficial” use and what was not. There was no limit to the amount of water they could use—any water left in a watershed was “wasted.” A miner with “senior” rights could lose an entire claim, just for letting water flow downstream. Soon, only the wealthy controlled the watersheds.

In 1850, California became a state, and federal law came into play. Under the federal system of government, states generally have full power to regulate water use. California officially became a state with two sets of water laws: the “riparian law” used by the federal government (from the eastern United States) and the “prior appropriation doctrine” (“first come, first served”), which had, up to statehood, managed the water supply in favor of agriculture and industry. What resulted was an enforcement of both “laws”—although applied differently



Private property sign

according to region. In the north, “prior appropriation” encouraged people to monopolize and exploit as much water as they could from the abundant sources. In the more arid south, where water was scarce and supply was seasonal, “riparian law” was the rule.

The growing population after statehood placed greater demands on California’s water sources. The State became

more and more interested in harnessing and protecting freshwater supplies. The Water Commission Act of 1913 called for the establishment of a permit process and the formation of a State Water Commission (later renamed the Water Rights Board) responsible for managing California’s public water supply. As one of its first acts, the

California Connections: Who Owns the Water?

Lesson 1 Activity Master | page 4 of 4

Commission determined that “riparian law” took precedence over “prior appropriation” law. The government would grant a permit to use water only if an individual’s use of the water coincided with a “greater public interest.” In 1928, voters passed a state constitutional amendment prohibiting the “waste of water” and stating that California’s water supply should be “put to the most beneficial use possible,” effectively giving ownership of the state’s waters to all of its residents.

By the end of the 1940s, additional management of the state’s water supply became necessary. Post-war industrial development and population growth had affected the health of California’s watersheds. Water pollution spread disease and resulted in loss of aquatic life. These changes severely affected the state’s recreational areas. At the same time, the state’s metropolitan areas were increasing their demand for clean, fresh water. California created the State Water Pollution Control Board in 1949 to set standards for water quality throughout the state. In 1967, the two state regulatory agencies merged into a single agency: the State Water Resources Control Board. Two years later, the state legislature passed California’s most powerful legislation for water protection—the Porter-Cologne Water Quality

Control Act. This Act gives the State Water Resources Control Board and its nine “regional boards” broad powers to preserve and enhance the water resources of California. The 1972 “Clean Water Act,” passed by the U.S. Congress, requires each state to enforce both state and federal standards for water quality.

California faces a future of continued population growth

combined with increased economic development, which means the regulatory tasks of the State Water Resources Control Board are more important than ever. In order to have enough clean, fresh water to meet the state’s increasing needs, the board is taking measures to conserve, protect, and enhance California’s water supply to the greatest extent possible.



Polluted river

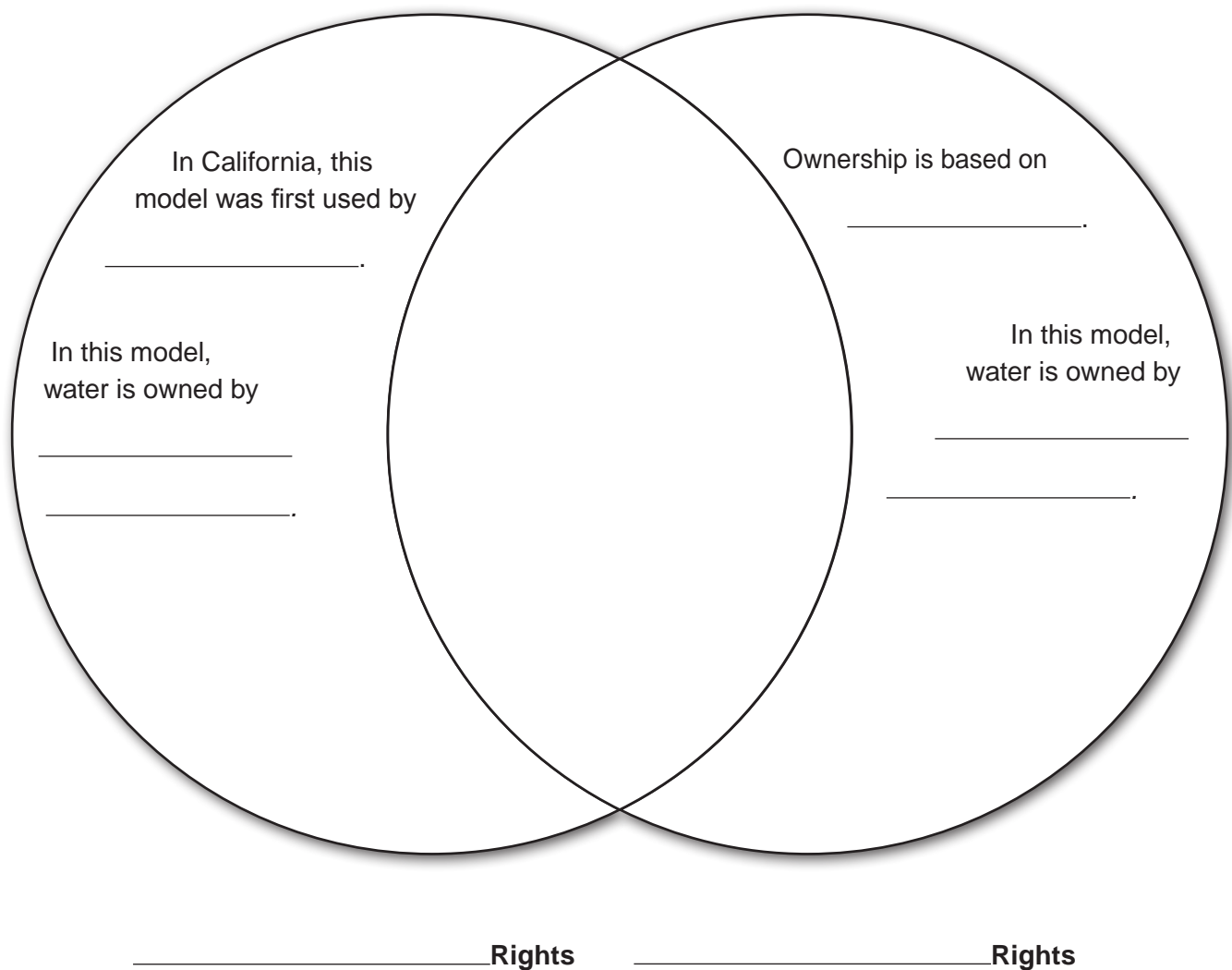
Who Owns the Resources?

Lesson 1 Activity Master | page 1 of 2

Name: _____

1. Complete the Venn diagram with information you have learned in this lesson. (1 point for each correct answer)

Private Property Rights: Two Types



Who Owns the Resources?

Name: _____

- a. Which model best describes the class simulation involving the chairs?

- b. Describe a chair scenario that would represent the other approach.

2. Answer the following questions about key events in California's water history. (1 point for each correct answer)

- a. What approach to water rights did gold miners use?

- b. After statehood, how many systems of water laws did California have?

- c. Which legal structure did the Water Commission Act of 1913 support?

- d. According to the 1928 amendment to the state constitution, who owns California's water?

3. Below is a list of natural resources. Some are renewable, others are not. If the resource is publicly owned, write public in the space provided. If it is privately owned, write private. If it can be both, write both. (1 point for each correct answer)

_____ a. air

_____ b. oceans

_____ c. oil fields in the United States

_____ d. protected lands

_____ e. wildlife

4. Why isn't California's water owned privately? Why is it considered to be publicly owned? Give two reasons. (1 point for each correct reason)

a. _____

b. _____

The Water Game

Lesson 2 Activity Master | page 1 of 2

Welcome

In this game you will play the role of either a farmer or a miner using the water from a local lake. The farmers own plenty of land that they can plant on; the miners own their mines. Everyone shares the water in the lake.



The class will be divided into four teams. Three of the teams represent farmers. (Each team represents one farmer, for a total of three farmers.) One team represents one miner.

Each farmer (one team) will start by planting one field of domestic-use crops (one sheet of paper = one field). Watering a domestic-use crop requires five buckets of water per field (one blue square = one bucket of water).

The team with the most chips at the end of the game will win a prize for each chip they earned.

How to Play

The game will have four rounds. The rounds will proceed as described below.

Round 1

1. Farmers take as much water as they need to water their one field of domestic-use crops. To do this, a representative for your team takes the number of blue squares equal to the number of buckets it needs to water the field. The farmers put the water on their fields by placing the blue squares on a sheet of paper.
2. Each farmer collects one chip from the teacher, who is playing the role of a consumer buying the crops raised.
3. The water cycle happens and the lake replenishes. To show this, each farmer returns X (as many as the teacher decides) buckets of water to the lake. The squares not returned are out of the game. The teacher collects them.
4. Farmers decide whether to expand production. Each farmer can add up to two fields in each round. You have three choices of what you can plant in additional fields.

Crop	Water Needed	Profit Per Field
Domestic-use crops	5 buckets per field	1 chip
Wheat	10 buckets per field	2 chips
Cotton	20 buckets per field	4 chips

The Water Game

- Each farmer announces to the class how many chips s/he collected in this round and how many fields of what crops s/he will plant in Round 2. The teacher records these on a chart. Farmers add a sheet of paper for each new field.

	Round 1 Chips; Fields/Crops	Round 2 Chips; Fields/Crops	Round 3 Chips; Fields/Crops	Round 4 Chips; Fields/Crops
Farmer 1				
Farmer 2				
Farmer 3				

Round 2

- Farmers take the amount of water they need for their fields.
- Farmers collect chips from the teacher.
- The water cycle replenishes water supply. Students return X (as many as the teacher decides) buckets of water to the lake.
- Farmers decide whether to expand production, by how much, and with what crops.
- Farmers announce their profits and next planting. The teacher records them.
- The miner starts to mine gold upstream from a river that feeds the lake. A small amount of mercury from the mining process leaks into the lake. Mark a big P for pollution onto X (as many as the teacher decides) blue squares to show that the water in the lake now has traces of mercury in it. The miner collects four chips for selling her/his gold.

Round 3

- Repeat Steps 1, 2, and 3 from Round 2.
- Notice that there is less water in the lake than there was. The amount of water decreases, but the salts present in the lake bed stay the same. So now, there is a larger proportion of salt in the water. Mark a big S for salt on X (as many as the teacher decides) blue squares to show that the water in the lake is getting saltier.
- If there is enough “clean” water left in the lake (does not have a “P” or “S”), repeat Steps 4, 5, and 6 from Round 2 to continue play. If there is not enough “clean” water left in the lake, end the game.

Debriefing the Water Game

Lesson 2 Activity Master | page 1 of 2

Name: _____

You participated in a simulation of a scenario called The Tragedy of the Commons. This scenario suggests that people inevitably deplete resources held as common property because it is not in anyone's interest to conserve them. Take the example of a common grazing pasture. Livestock owners would all benefit from grazing their animals on the common pasture. Each owner would add more of his own animals to the pasture. After all, the food would cost nothing, and the additional animals would increase the owner's income. Because every owner would do the same thing, none would consider how many animals the pasture could actually sustain. After some period of time, the grazing animals would deplete the pasture.

Answer the questions below to help you think about your experience in the simulation.

Scarcity

1. If you, as a farmer, had been required to pay for the water in the lake, how would it have affected your choice of what crops to plant? (2 points)

2. If you, as a miner, had been required to pay for polluting the water in the lake, how would it have affected your choice of whether/how much to mine? (2 points)

3. How did the water being free affect your sense of its abundance or scarcity? (2 points)

Quantity and Quality

4. How did human behavior affect the quantity of the water? (2 points)

5. What actions caused the change in quantity? (2 points)

Debriefing the Water Game

Lesson 2 Activity Master | page 2 of 2

Name: _____

6. How did changing the quantity of the water affect the quality of the water? (2 points)

7. How did the miner's behavior affect the quality of the water? (2 points)

The Tragedy of the Commons

8. The Tragedy of the Commons says that if no one owns a resource, that resource will be degraded and depleted. Is that what happened in the simulation? Explain your answer. (3 points)

9. What outcome would each of these scenarios produce?

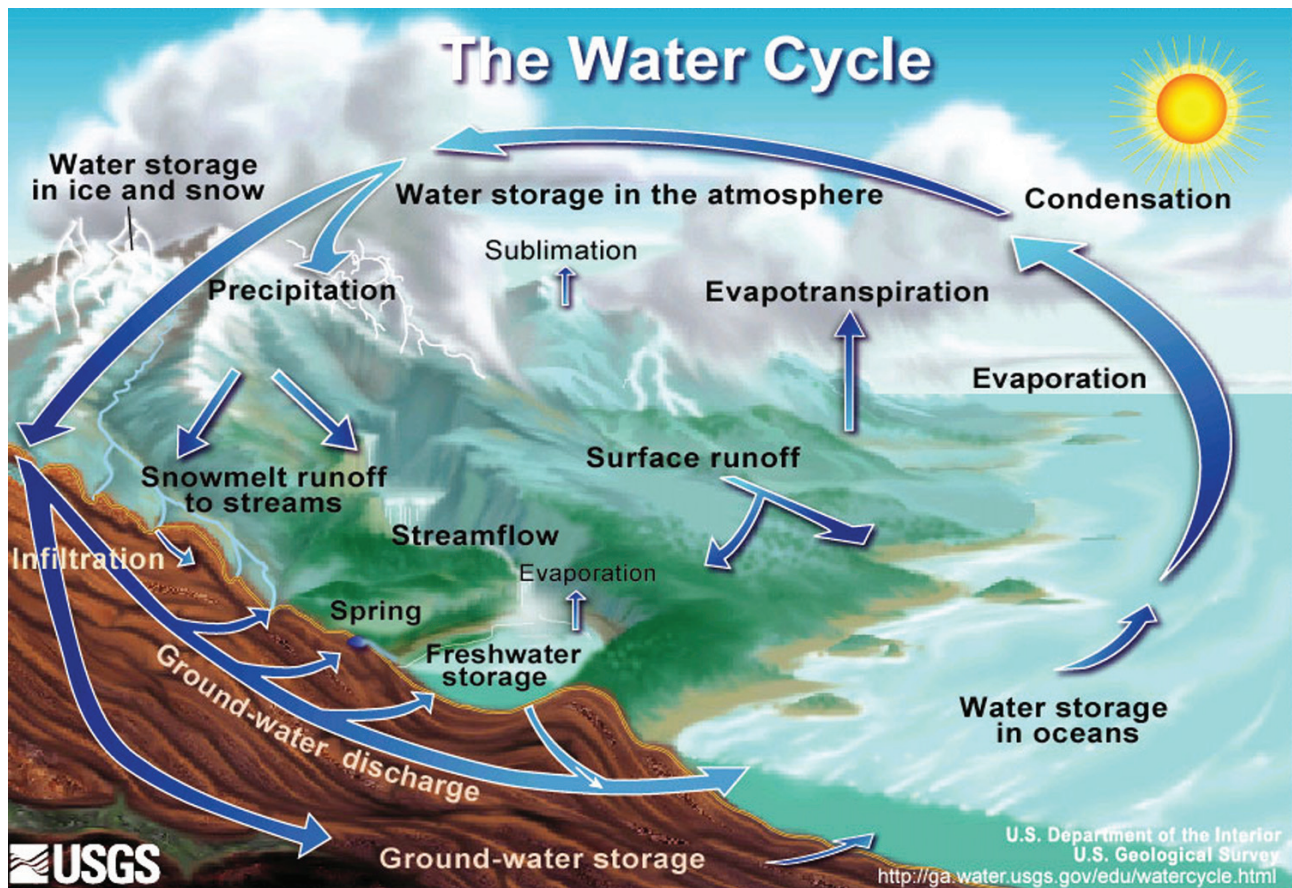
- a. If one farmer had owned the lake: (2 points)

- b. If all the farmers together owned the lake: (2 points)

- c. If the miner's actions had been regulated: (2 points)

- d. If the government regulated the lake: (2 points)

The Water Cycle



Simulation Roles

Lesson 3 Activity Master

Constitutional
Lawyer

Owens Valley
Resident

Los Angeles
Business Owner

Conservationist

Former Owens
Valley Resident

Preservationist

Water: California's Publicly-Owned Good

When American prospectors began arriving in California in 1848, they were thousands of miles from the center of the U.S. government. Thus, they came up with their own water laws. It was “first in time first in line” on the mining frontier: the first person to claim ownership of the water owned the water. Economists call their policy prior appropriation doctrine. But laws in the East, based on British common law, favored riparian rights.

Riparian rights gave landowners the right to use the water adjacent to their property for domestic purposes. Prior appropriation allowed water owners to divert rivers (which prospectors frequently did) and based continued ownership on the owner's using the water. Riparian rights limited the amount of water owners could use; they could not use, or divert, so much water that those downstream would be deprived.

As you might imagine, having two competing systems for deciding who owned the water caused more than its share of problems! These problems made their way into California's courtrooms in the late 1800s and early 1900s. *Lux v. Haggin*, a legal struggle that lasted from 1879 to 1886, revealed the deep schism between the state's two systems of water ownership. James Haggin and his business partner William Carr bought up huge amounts of farmland in the San Joaquin Valley in



Irrigation canal

the 1870s. Despite being large landowners, they fashioned themselves as champions of the small farmer and advocates of the appropriation doctrine. On the other side of the battle were Charles Lux and his

business partner Henry Miller. Lux and Miller owned a lot of land downstream from Haggin and Carr. When Haggin began building canals to divert his water—which prior appropriation said he could do—Lux took him

Water: California's Publicly-Owned Good

Lesson 3 Activity Master | page 2 of 3

to court. After two appeals, Lux won. The landmark California Supreme Court decision declared that riparian rights were the law of the land—except when they weren't! Prior appropriation would take precedence if the appropriator had been using water from a stream before the riparian acquired the property. In short, *Lux v. Haggin*, while a landmark decision, did not resolve the tension about how to decide who owned the water.

The water wars intensified as California's population grew and more city dwellers, farmers, and miners competed for the state's limited supplies. As the twentieth century began, the problem of water ownership extended beyond individual owners to include tensions between cities (San Francisco and Los Angeles) and between cities and rural areas. A case in point was Los Angeles' grab for water from the Owens Valley 235 miles away. LA's leaders had a vision that theirs would become California's biggest, most important city. To do so, it would need a lot of water. Three men took the lead in securing that water—and small fortunes for themselves. William Mulholland was superintendent of the LA municipal water system. Thomas Eaton was a former LA mayor and water



Owens River

engineer. And Thomas Lippincott was a representative of the U.S. Reclamation Service. The three men aggressively pursued—sometimes together, sometimes against each other—the rights to the land and water in Owens Valley. By repeatedly stirring up the fear of water shortages, they got city residents to commit money to bring Owens Valley water to LA. At the same time, they quietly bought up land in the Owens Valley—land that the city would have to purchase (at a high cost) to build the aqueduct it would need to carry water from the valley to the city.

Of course, many people also opposed the Owens Valley project. First among them were the people of the Owens Valley—who were not getting rich. Damming the river was going to flood their once-rich farmland. But, then-President Theodore Roosevelt gave the project a stamp of approval. Roosevelt was a Progressive who applied a utilitarian approach to water use (and to other natural resources as well). How could the Owens Valley water provide the greatest benefit to the greatest number of people? Of course the answer



Aerial view of Owens River

was obvious to him. Supporting the transport of water from the valley to Los Angeles, Roosevelt said, “It is a hundred or thousandfold more important to the State and more valuable to the people as a whole if [the water is] used by the city than if [it is] used by the people of the Owens Valley.”

With the tug of war for water taking place on all fronts—from individuals taking their claims to court to cities grabbing for water from distant locales—it was clear that California had a problem: how to make decisions who owned the water and how to use that scarce resource.

The requirement to balance the needs of city-dwellers, farmers, preservationists, and miners made solving the problem more difficult. Clearly some sort of statewide oversight was called for.

In 1913, the state passed the Water Commission Act, which created the first State Water Commission. The Commission’s charge was to decide how to appropriate water in the state that no one already owned. The Act also declared that riparian law, not prior appropriation, was the law of the land. Finally, the Act asserted that government would grant water permits based on the “public good”—that is,

water use was to serve the good of the people. The 1913 Act defined public good broadly. It included water for cities, for irrigation, for mining, and for power generation.

By 1928, Californians took another, more definitive step toward addressing the question of water ownership. State citizens voted to amend the state constitution. The amendment asserted that water belonged to everyone in the state, not to private individuals or to corporations. Because water was a “public good,” the state government oversaw its use on behalf of the people.

In the case of California’s water—the necessary resource was scarce and flowed unevenly through the state—private ownership failed. While the rules of the free market might suggest that private ownership would have led owners to protect both the quality and quantity of water, that is not what happened. Private owners neither conserved the quantity nor improved the quality of California’s water. By 1928, California’s citizens had claimed the water for the good of the people and ushered in an era of government stewardship of the state’s most prized resource.

Proposed 1928 Amendment to the California Constitution

SECTION 1. The right of eminent domain is hereby declared to exist in the State to all frontages on the navigable waters of this State.

SEC. 2. It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained.

SEC. 3. All tidelands within two miles of any incorporated city, city and county, or town in this State, and fronting on the water of any harbor, estuary, bay, or inlet used for the purposes of navigation, shall be withheld from grant or sale to private persons, partnerships, or corporations; provided, however, that any such tidelands, reserved to the State solely for street purposes, which the Legislature finds and declares are not used for navigation purposes and are not necessary for such purposes may be sold to any town, city, county, city and county, municipal corporations, private persons, partnerships or corporations...

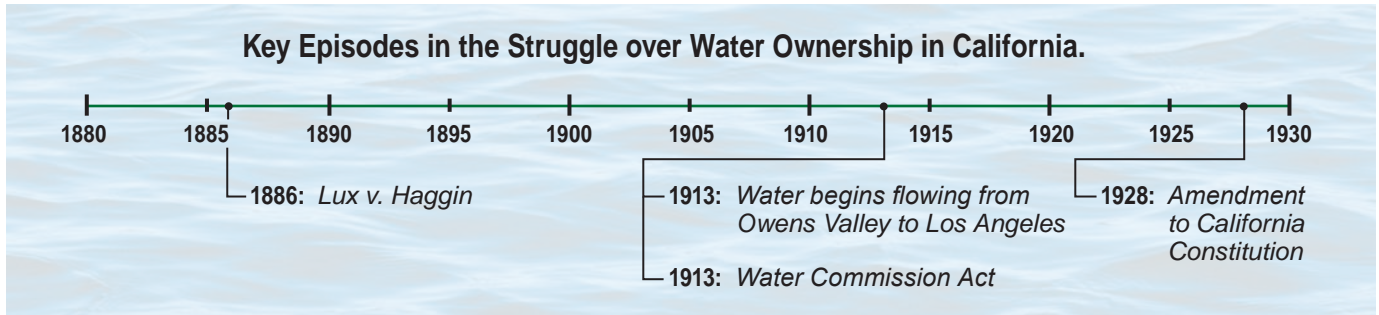
SEC. 4. No individual, partnership, or corporation, claiming or possessing the frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State, shall be permitted to exclude the right of way to such water whenever it is required for any public purpose, nor to destroy or obstruct the free navigation of such water...

SEC. 5. The use of all water now appropriated, or that may hereafter be appropriated, for sale, rental, or distribution, is hereby declared to be a public use, and subject to the regulation and control of the State, in the manner to be prescribed by law...

Putting It All Together

Lesson 3 Activity Master | page 1 of 2

Name: _____



Write complete responses regarding these pivotal decisions. (4 points each)

1. Describe *Lux v. Haggin* and explain its importance.

2. Describe the Owens Valley Aqueduct and explain its importance. This aqueduct also showed that water did not have to be local – it could be imported.

3. Describe the 1913 Water Commission Act and explain its importance.

Lesson 3 Activity Master | page 2 of 2

4. Describe the 1928 Amendment to the California Constitution and explain its importance.

-
- This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Reading Guide

1. What were the two types of water law in California after statehood?

2. What was the conflict in *Lux v. Haggin*?

How was it resolved?

What did the resolution mean in terms of who owned California's water?

3. What was the water conflict involving Owens Valley and Los Angeles?

How was it resolved?

What did the resolution mean in terms of California's water?

4. What did the 1913 Water Commission Act do?

How did it change the situation in California?

California's Land Trust

Background

Government efforts to conserve natural resources abound. The National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Services are government agencies that manage land owned by the U.S. government. One of the purposes of government ownership of the land is conservation. But private individuals and companies own a great deal of American land. How can landowners be encouraged to foster conservation efforts on their land? How can they protect the ecosystems on their property?

Land trusts are one answer. Land trusts are private, voluntary organizations that identify, protect, and steward conservation lands.

The tool of land trusts is the conservation easement. A conservation easement is a legal agreement between a landowner and a land trust. The easement restricts development on a tract of land in order to conserve that land. Under land trust agreements, property owners continue to own their land, but at the same time, they agree to certain limitations.

For example, a property owner might maintain her right to live on her land and grow crops, along with giving up the right to sell off parcels of the land for development or to develop the land for her own use. Land trusts help make it possible for private property owners to conserve their land and the wildlife that lives on it, rather than developing it in ways that damage natural ecosystems.



Tejon Ranch

Participating in a conservation easement can be financially rewarding for landowners. They can sell easements on their property to land trusts. In doing so, they make money by conserving the resources on their land. At the same time, they retain many of the rights of private property ownership, like living on and using the land. Government policies like tax breaks can also make conservation easements more attractive for landowners.

The Tejon Ranch Company Agreement

In May 2008, the Tejon Ranch Company agreed to set aside for conservation 90 percent of its vast land holdings north of Los Angeles. Of

its 270,000 acres, Tejon will set aside 178,000 acres now. The government will have the option to buy another 62,000 acres in the future.

In exchange for agreeing to conservation easements on the land, Tejon gained assurances from a coalition of environmentalist groups that they will not interfere with the company's plans to develop 10 percent of its holdings. The groups—the Natural Resources Defense Council, the Sierra Club, Audubon California, and others—could have held up Tejon's development plans for years in court battles.

Like many conservation easements, this one allows certain existing uses of the land to continue. The owners can still use portions of the land for cattle grazing, gravel mining, oil and gas removal, and movie making.

Who Favors the Agreement?

Governor Arnold Schwarzenegger praised the agreement, saying, "We can protect California's environment at the same time we pump up our economy.... When forward-thinking people are willing to sit down and make something positive happen, those old battle lines can be terminated."

The coalition of environmental groups heralded the agreement because it will ensure conservation of a large contiguous piece of land. By reaching an agreement now, environmental groups avoid a situation in which the company could have developed small parcels over many years. In that case, if environmental groups objected to the development, they would have

had to fight each development separately, likely with mixed results. "While a win-some-lose-some record might be OK in baseball," two environmental leaders wrote, "it's not always good for the environment."

Tejon Ranch Company also had a lot to gain by agreeing to the easements. In part, company owners can feel good that they are doing something for the common good. Robert A. Stine, president and CEO of Tejon Ranch Company, said, "Owning so much land, there's certainly a duty. To whom much is given, much is expected." In addition, agreeing to the easements works to the company's financial advantage. They can still develop 10 percent of the land, and they can go forward with development with no fear of hindrance by lawsuits. They can receive tax deductions, including estate and property tax relief.

Who Opposes the Agreement?

Not everyone supports the agreement. The Center for Biological Diversity did not sign on because it did not believe the agreement would sufficiently protect the habitat of the endangered California condor. Some private property advocates also oppose land trust agreements. They believe that the collaboration between private property owners and government agencies undercuts private property rights. In fact, the agreement includes a provision that would allow the state of California to buy 49,000 acres for a state park.

Public Goods, Private Goods: The Question of Conservation

Lesson 4 Activity Master | page 1 of 2

Name: _____

1. How do land trusts contribute to conserving natural resources? (5 points)

2. How do land trusts differ from national or state parks? (5 points)

3. Why might a land trust be a better idea than making all conservation land government property?
Give two reasons. (5 points each)

a. _____

b. _____

Public Goods, Private Goods: The Question of Conservation

Lesson 4 Activity Master | page 2 of 2

Name: _____

4. You learned that in California history private ownership did not help conserve or preserve the quantity and quality of water. But some private ownership, maintained through land trusts, has conserved or preserved land, vegetation, and wildlife. Why does private ownership through land trusts work to preserve some natural resources, but private ownership of water in California did not work? (5 points)

5. In what ways are land trusts limited in their ability to conserve and improve natural resources? (5 points)

Incentives and Regulations for Timber Owners

Background

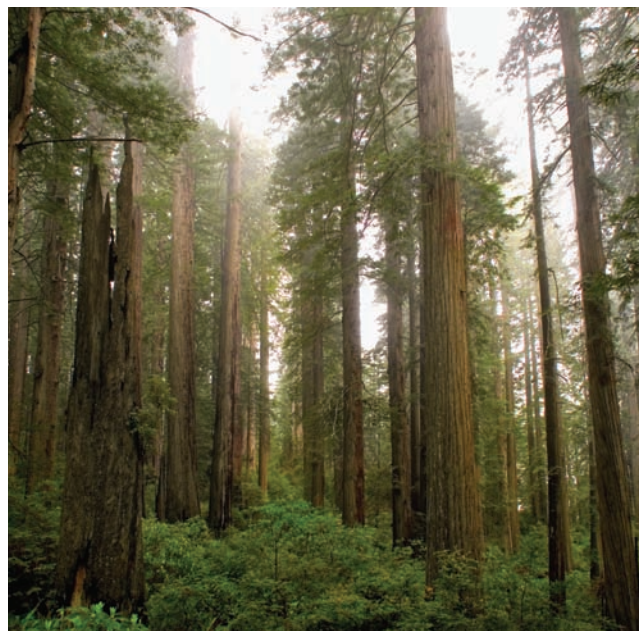
Forests account for 40 percent of California's land. Of the 40 million acres of forestland in the state, 3 million are timberland—that is, managed for harvesting. Since the Gold Rush, timber has been an important economic resource in California. For more than a century, the state and federal governments have regulated timber use. Currently, in addition to regulations, incentives encourage timberland owners to conserve.

Some Timber Conservation Regulations in California

Numerous state and federal regulations govern the harvesting of timber in California. Three state regulations are described below.

1. California Environmental Quality Act (CEQA) requires timber owners to submit timber harvesting plans to the California Department of Fish and Game (DFG). The DFG and other agencies—such as Regional Water Control Boards, the California Geological Survey, and the Department of Parks and Recreation—recommend changes that would protect wildlife, plants, and water quality. The California Department of Forestry and Fire Protection ultimately reviews the plans and makes decisions based on the recommendations of the reviewing agencies.

2. California Forest Practices Act ensures that logging is done in a manner that will protect fish, wildlife, and streams, as well as the integrity of forests.



Redwood forest

3. California Endangered Species Act (CESA) prohibits any person from “taking” endangered or threatened bird, mammal, fish, amphibian, reptile, or plant species (or subspecies) native to California. In the case of timber harvesting, CESA allows the DFG to authorize takings in some circumstances.

Some Incentives for Timber Conservation in California

Regulations are one way to govern timber harvesting. Incentives are another. Three incentive programs—two state and one federal—are described here.

1. Forest Improvement Program (California) encourages private and public investment in, and improved management of, California forest lands and resources. The goal is to ensure adequate high quality timber supplies, related employment and other economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the



Logs

benefit of present and future generations. The program provides technical assistance, financial assistance for management planning, site preparation, tree purchase and planting, timber stand improvement, fish and wildlife habitat improvement, and land conservation practices for privately owned forest land.

2. Conservation Banking (U.S. Fish and Wildlife Service) offers landowners incentives to protect

habitats of endangered or threatened species. Landowners can sell habitat or species credits to developers. By buying credits at a conservation bank, landowners compensate for environmental damage they might cause. Conservation “bankers” get to keep their land, generate income, get tax breaks, and preserve open space. Private, tribal, state, and local lands are eligible. Although this is a federal program, most of the country’s conservation banks are located in California.

3. Natural Community Conservation Planning Programs (NCCPP) develop conservation plans at the ecosystem level—rather than focusing on endangered species on a case-by case basis—while allowing for compatible development. Under NCCPP, the state government may enter into agreements with private parties to prepare habitat conservation plans. NCCPP provides developers with a streamlined process for dealing with state and federal regulations and assures them that they will not face new conservation requirements, even if additional species or habitats are listed as endangered in the future.

Numerous other incentive programs provide technical and financial assistance to private property owners to encourage protecting wildlife habitats and endangered species.

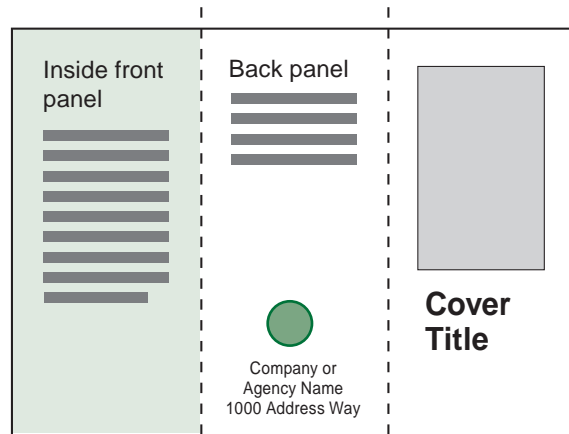
Conservation Banking Brochure or Web Page Instructions

Lesson 5 Activity Master

Instructions: Develop a brochure or web page that “advertises” conservation banks as an incentive for private property owners to conserve natural resources. The brochure or web page should encompass the following:

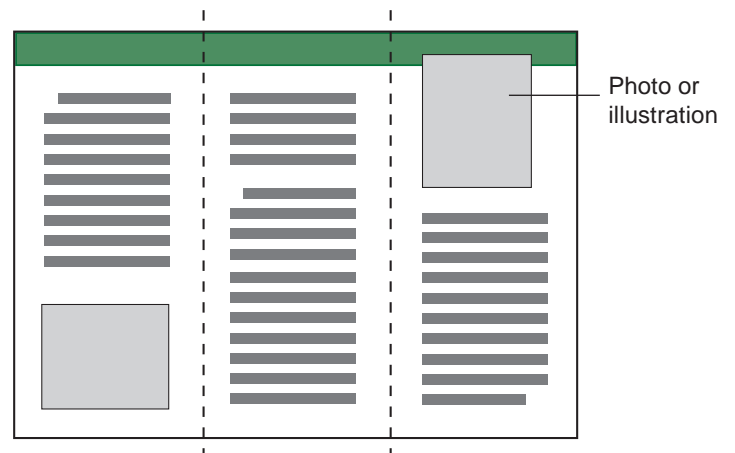
1. Define conservation banking and explain how it works. (5 points)
2. Identify advantages to developers of conservation banking.(10 points)
3. Identify advantages to landowners of conservation banking. (5 points)
4. Identify advantages to the environment of conservation banking. (5 points)
5. Present material in a clear and persuasive way. (5 points)

Sample Outside Brochure

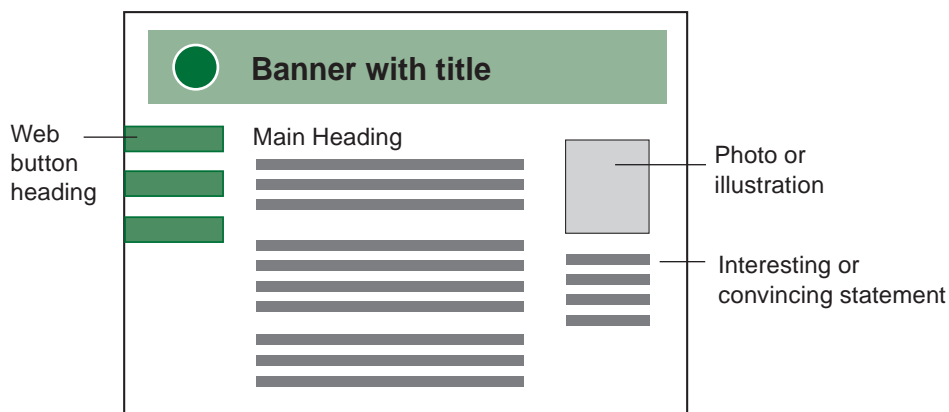


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Sample Inside Brochure



Sample Web Page



Credits

Editing Credits

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Printing	Robinson Anderson Print & Fulfillment Services, Sacramento, California
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Page 18	The Water Cycle – Courtesy of the U.S. Geological Survey
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